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EXAMINER

RIMELL, SAMUEL G

ART UNIT	PAPER NUMBER
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2164

DATE MAILED: 05/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/673,628

Applicant(s)

HIGASHI, MASATO

Examiner

Sam Rimell

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8, 11, 14 and 15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8, 11, 14-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

  
**SAM RIMELL**  
**PRIMARY EXAMINER**

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

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The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-8, 11 and 14-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Machida (U.S. Patent 6,209,060).

Claim 1: FIG. 1 illustrates a computer system. The computer system is composed of a plurality of disk devices (30-1 through 30-n). FIGS. 6-7 illustrate an updating program that updates firmware from a reference disk to a replaced disk.

The updating occurs in response to turning on a power source. In one respect, the updating must occur after the power is turned on, so it considered to be occurring in response to turning on the power. In a second respect, the updating occurs after a physical disk has failed and been replaced (col. 8, lines 57-67). The updating steps occur “at first, after a disk has been replaced”, beginning with step S1-S2 in FIG. 6 (col. 8, line 6). This illustrates that the updating program is the first operation that occurs after the power is on.

Step S5 of FIG. 6 is further detailed in FIG. 7, and shows that that the updating of firmware is performed after the a parameter (version number) of the reference disk is compared to a version number of the replaced disk (steps S15-S17). The reference disk and replaced disk are the first memories. If the version number of the reference disk is higher, the firmware is transferred to a buffer 107 which is the second memory, and then updated to the replaced disk (steps S5 through S8 of FIG. 6).

Claim 2: FIGS. 6-7 illustrate method steps for updating firmware in a system having a plurality of disk devices (FIG. 1, disks 30-1 through 30-n).

Step S1 is the starting step. In one respect, the updating must inherently occur after the power is turned on, so it occurs in response to the power being turned on. In a second respect, the starting step occurs after a physical disk replacement (col. 8, lines 57-67). Since the starting step S1 occurs “at first” after the disk replacement, it is occurring as the first operation after the power is turned on.

Step S7-S8 involves transmitting the firmware update from the first memory of one of the disk devices (the memory of the reference disk) to a second memory (transfer buffer 107). The second step involves transmitting the firmware update from the second memory (transfer buffer 107) to the updated disk (replaced disk). The second memory can further receive additional updated firmware when additional disks are to be updated.

Claim 3: As seen in FIG. 5, each disk has stored specific information.. This specific information includes a model name (Type A), and revision number showing a version of the firmware (version number 0003, for example). As seen in step S16 in FIG. 7, the programming assures that the latest revision number is applied to the replaced disk. The actual transmission of the latest revision is accomplished at steps S7-S8 in FIG. 6.

Claim 4: As seen in FIG. 5, the specific information for each disk includes a model name (Type A) and version number (version number 0003, for example). In following the steps of FIGS. 6-7, the reference disk will have a different revision number than the replaced disk. At the same time, model numbers of the disks may be the same (FIG. 5 and col. 8, lines 36-37).

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Claim 5: See remarks for claim 4. Note that version numbers fall within a revision number range from 0001 to 0003 (See FIGS. 8A-8D which illustrates the ranges of revision numbers).

Claim 6: See remarks for claim 4. Note that the updated firmware will have the latest revision number (steps S15 through S17 of FIG. 7) as well as be within a range of revision numbers (FIGS. 8A-8D).

Claim 7: The program steps of FIGS. 6-7 are invoked when the system is on.

Claim 8: FIG. 1 illustrates a computer system. FIGS. 6-7 is an update program for updating firmware of the disk devices.

The update program is initiated in response to turning on the power. See the remarks in the second paragraph of the discussion of claims 1 and 2 to illustrate this feature.

The disks themselves define first memory. The buffer (107) is second memory. The updated firmware is transmitted from the reference disk to the second memory (buffer memory 107) and then from the second memory (buffer memory 107) to a replaced disk.

Claim 11: As seen in FIG. 7, the system compares a parameter (version number) of the reference disk to a parameter (version number) of the replaced disk. If the version number of the reference disk is higher, the version on the reference disk is transmitted to the replaced disk.

Claims 14-15: FIG. 1 illustrates a computer system having a plurality of disk devices (30-1 through 30-n) each of which storing firmware (31-1 through 31-n). FIG. 6 illustrates an updating program for updating the firmware of a replaced disk from a reference disk. S1 is the starting step. FIG. 7 is a breakout of the step S5 in FIG. 6 and illustrates step S16 in which a

determination is made as to whether the replaced disk has the latest version of firmware. If it is not the latest version, the updating proceeds with steps S6 through S8 of FIG. 6.

Remarks

Applicant's arguments have been considered.

The rejection under 35 USC 112, first paragraph, has been overcome by the submitted amendment. However, claims 1, 2 and 8 as now amended read upon the Machida reference as it has been applied. The details of the application of the Machida reference are set forth in the specific discussions associated with claims 1, 2 and 8.

Independent claims 14 and 15 have not been amended. Applicant argues that in Machida, there is only shown one disk device being replaced, and thus concludes that Machida teaches the concept of only replacing one single disk device, and does not teach the concept of replacing all the disk devices. This argument is not correct for three reasons:

(1) The claims do not state that all of the disk devices in the computer system are updated. The claims only identify a plurality of devices being updated, which simply means more than one. This does not mean that every single one of the devices are updated. For example, if a computer system had ten disk devices, a plurality of such devices could be as few as two of such devices. In such instance, only two of the ten devices would then have to be updated in order to meet the claimed requirements.

(2) Given that the claims merely require that two or more devices be updated, it is clear in Machida that multiple disk devices are in fact being updated. Note how the disk devices in FIG. 1 are labeled as 30-1 through 30-n, clearly indicating the presence of multiple replaced disks, meeting the requirement for a plurality of disks being updated.

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(3) The arrangement of Machida can in fact update all the replaced disk devices under the condition that all of the disk devices actually need updating. This is a condition which will occur in the Machida system, and does in fact appear to be occurring in the system architecture which is shown in FIG. 1. Machida (FIG. 1) illustrates "30-n" disk devices being replaced (updated), which demonstrates that all of the "30-n" disk devices will receive the replacement firmware. There is no suggestion in Machida that certain disks are skipped, or denied the upgrade.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication should be directed to Sam Rimell at telephone number (571) 272-4084.



Sam Rimell  
Primary Examiner  
Art Unit 2164